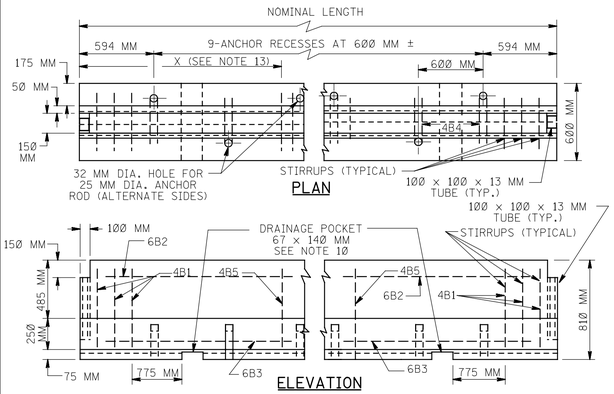
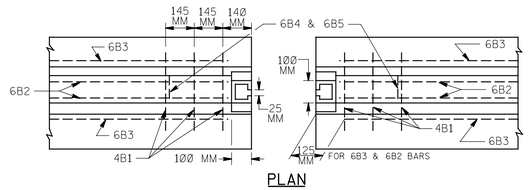
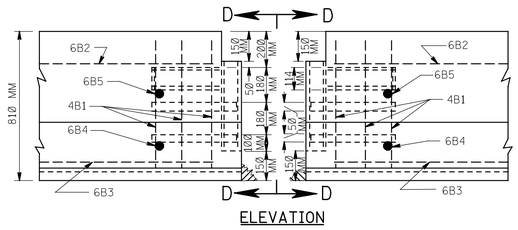


CONCRETE BARRIER



PLAN



BARRIER AT JOINT

NOTE A

THE LENGTH OF THE ANCHOR PINS SHALL BE SUCH THAT THE FOLLOWING MINIMUM EMBEDMENT LENGTHS ARE OBTAINED:
(a) INTO PORTLAND CEMENT CONCRETE PAVEMENT 125 MM.
(b) INTO FLEXIBLE PAVEMENT 450 MM
(c) INTO UNPAVED AREA 750 MM
WHEN ANCHOR PINS ARE IN PLACE, THEY SHALL NOT PROJECT ABOVE THE PLANE OF THE CONCRETE SURFACE OF THE BARRIER.

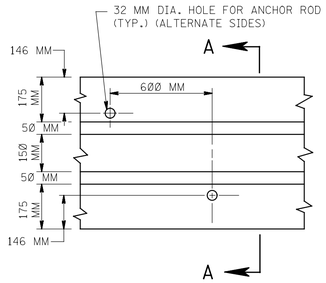
HOLES IN BRIDGE DECKS SHALL BE 32 MM DIA. MAXIMUM AND MADE WITH A CORE DRILL OR ANY OTHER APPROVED ROTARY DRILLING DEVICE THAT DOES NOT IMPART AN IMPACT FORCE.

NOTE B

IN UNITS THAT ARE TO BE ANCHORED, PINS SHALL BE REQUIRED IN EVERY ANCHOR RECESS.

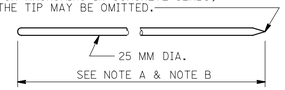
NOTE C

FOR INSTALLATION ON BRIDGE DECKS REFER TO BRIDGE PLANS FOR NECESSARY MODIFICATIONS AS REQUIRED AND GENERAL NOTE 16.



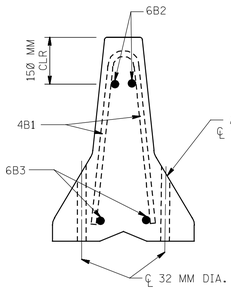
PLAN-ANCHOR RECESS

FOR ANCHORING IN CONCRETE SLABS, THE TIP MAY BE OMITTED.

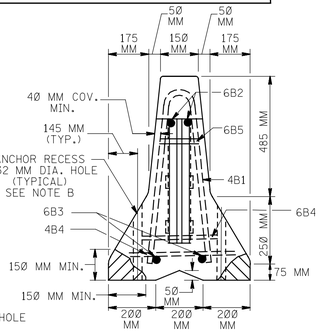


ANCHOR PIN

JOINT CLASS	TABLE OF JOINT AND ANCHORAGE TREATMENTS JOINT TREATMENT
A	CONNECTION KEY ONLY
B	CONNECTION KEY & GROUT IN EVERY JOINT
C	CONNECTION KEY & GROUT, IN EVERY JOINT & PIN EVERY OTHER UNIT. IN UNITS THAT ARE TO BE ANCHORED, PINS SHALL BE REQUIRED IN EVERY ANCHOR RECESS

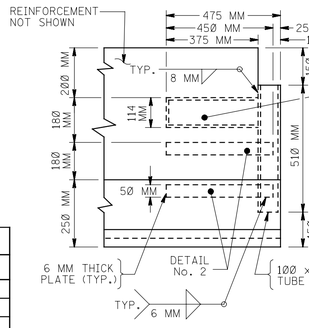


SECTION A-A

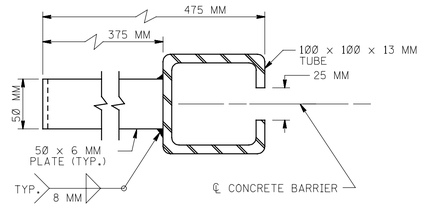


PLACE GROUT IN HATCHED AREAS BETWEEN SECTIONS, WHEN REQUIRED BY THE TABLE OF JOINT TREATMENT.

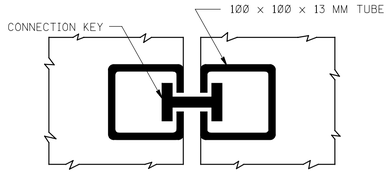
SECTION D-D



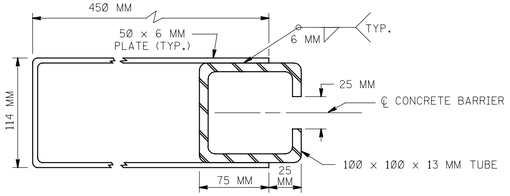
ELEVATION



PLAN VIEW
DETAIL No. 1



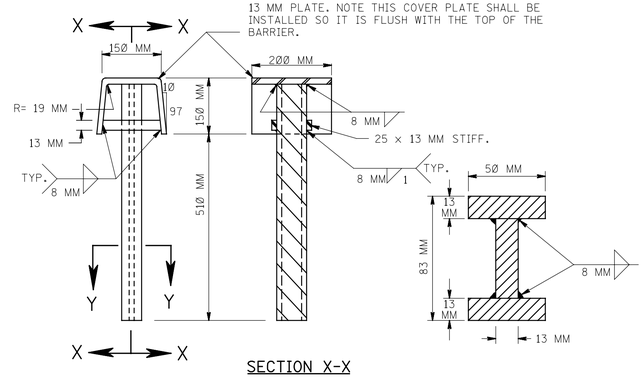
KEY IN PLACE



PLAN VIEW
DETAIL No. 2

GENERAL NOTES:

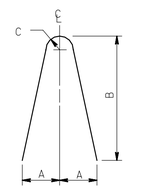
1. STEEL PLATE SHALL BE ASTM A 36, A 588, A 441, OR A 572 GRADE 345.
2. REINFORCING BARS SHALL BE ASTM A 615, GRADE 400.
3. CONCRETE SHALL BE CONCRETE / WHITE CONCRETE CLASS B.
4. CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 40 MM (MIN.).
5. A MINIMUM OF (2) TWO RECESSED LIFTING DEVICES SHALL BE USED ON EACH SECTION. EACH LIFTING DEVICE SHALL HAVE A MINIMUM CAPACITY OF 5.4 MEGAGRAMS.
6. TUBE STEEL SHALL BE ASTM A 500, GRADE B OR C.
7. ANCHOR PINS SHALL BE 25 MM DIA. ASTM A 36M.
8. ANCHOR PINS ARE NOT REQUIRED IN EVERY UNIT. SEE TABLE OF JOINT TREATMENTS.
9. ALL END SECTIONS SHALL BE PINNED UNLESS OTHERWISE NOTED.
10. 67 × 140 MM DRAINAGE POCKETS - TWO REQUIRED IN SECTIONS 3.6 METERS & GREATER, 1 REQUIRED IN 2.4 METER & 3.0 METER SECTIONS.
11. AFTER A BARRIER UNIT HAS BEEN PLACED AND THE CONNECTION KEY INSERTED, REMOVE ANY SLACK IN THE JOINT BY PULLING THE UNIT IN A DIRECTION PARALLEL TO ITS LONGITUDINAL AXIS.
12. THE PRECAST CONCRETE CURB, CONSTRUCTION BARRIER SHALL BE CAST IN STEEL FORMS.
13. THE PRECAST CONCRETE CURB SHALL BE UNITS OF 6 METERS, HOWEVER, OTHER LENGTHS MAY BE USED TO MEET FIELD CONDITIONS, THE NUMBER AND PLACEMENT OF THE 4B4 AND 4B5 BARS WILL VARY WITH THE LENGTH OF THE BARRIER UNIT AS SHOWN ON THE TABLE OF VARIABLE BARS, THE 6B2 AND 6B3 BARS SHALL BE 250 MM SHORTER THAN THE NOMINAL LENGTH OF THE BARRIER UNITS.
14. REINFORCING SHOWN IS THE MINIMUM REQUIRED. ADDITIONAL REINFORCING NECESSARY FOR HANDLING SHALL BE THE OPTION AND RESPONSIBILTY OF THE CONTRACTOR.
15. WELDING AND FABRICATION OF STEEL STRUCTURES SHALL BE IN ACCORDANCE WITH SECTIONS 1 THRU 6 OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE AND SECTION 10 OF THE ANSI/AWS D.1 STRUCTURAL WELDING CODE. SURFACES TO BE WELDED SHALL BE FREE OF SCALE, SLAG, RUST, MOISTURE, GREASE, OR ANY OTHER MATERIAL THAT WILL PREVENT PROPER WELDING OR PRODUCE OBJECTIONAL FUMES. WELDING SHALL BE SHALL BE SHIELDED METAL ARC WELDING USING PROPERLY DRIED 4 MM DIA. E7018 ELECTRODES.
16. AFTER REMOVAL OF THE BARRIER, THE HOLES IN THE SURFACE ON WHICH THE BARRIER SAT WHICH WERE USED TO ANCHOR THE SYSTEM, SHALL BE FILLED. THE ONLY EXCEPTION IS WHEN THE HOLES ARE IN AN AREA WHICH IS TO BE REMOVED. HOLES IN FLEXIBLE PAVEMENT, OR UNPAVED AREAS SHALL BE FILLED AS DIRECTED. HOLES IN PORTLAND CEMENT CONCRETE PAVEMENTS, OR STRUCTURAL DECKS, SHALL BE FILLED WITH NON-SHRINK GROUT MATERIAL MEETING THE REQUIREMENTS OF SECTION 914.03, EXCEPT THAT IN LATEX MODIFIED CONCRETE BRIDGE DECK, A COMPATIBLE NON-SHRINK GROUT MATERIAL SHALL BE USED.



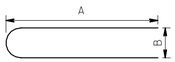
CONNECTION KEY

BARS LIST (EACH BARRIER SECTION)								
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C	LOCATION
4B1	#13	6	1 500 MM	I	125 MM	660 MM	50 MM	STIRRUPS
4B4	#13	SEE NOTE 13	940 MM	II	390 MM	100 MM		STIRRUPS
4B5	#13	SEE NOTE 13	1 500 MM	I	125 MM	660 MM	50 MM	STIRRUPS
6B2	#19	2	SEE NOTE 13	STR.				LONGITUDINAL (TOP) NORMAL SECTION
6B3	#19	2	SEE NOTE 13	STR.				LONGITUDINAL (BOTTOM) NORMAL SECTION
6B4	#19	2	355 MM	STR.				TRANSVERSE (BOTTOM) NORMAL SECTION
6B5	#19	2	150 MM	STR.				TRANSVERSE (TOP) NORMAL SECTION

TABLE OF VARIABLE BARS			
NOMINAL LENGTH OF BARRIER UNIT	MARK	"X"	NO. EACH SECTION
6.0 M	4B4	N.A.	9
6.0 M	4B5	2 110 MM	2
5.4 M	4B4	N.A.	8
5.4 M	4B5	1 955 MM	2
4.8 M	4B4	N.A.	7
4.8 M	4B5	1 805 MM	2
4.2 M	4B4	N.A.	6
4.2 M	4B5	2 135 MM	1
3.6 M	4B4	N.A.	5
3.6 M	4B5	1 830 MM	1
3.0 M	4B4	N.A.	4
3.0 M	4B5	1 525 MM	1
2.4 M	4B4	N.A.	3
2.4 M	4B5	-	0
"X" DISTANCE FROM END OF BARRIER TO 4B5 BAR			



TYPE "I" BAR



TYPE "II" BAR

PRECAST CONCRETE CURB, CONSTRUCTION BARRIER JOINT CONNECTION DETAILS

CD-617-4.1

NOTE: ALL DIMENSIONS SHOWN ON THIS SHEET ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

PRECAST CONCRETE CURB, CONSTRUCTION BARRIER, TYPE 4 (ALTERNATE A)

N.T.S.

CD-617-4

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

BDC02D-01 - CD-617-4.1
BDC01D-4 - ORIGINAL SHEET